

## **LPG COMBUSTION - INDUSTRIAL AND COMMERCIAL AND RECREATIONAL CES CATEGORIES**

66795 - Industrial LPG Combustion

58727 - Commercial LPG Combustion

66837 - Recreational LPG Combustion (Unspecified Combustion Sources)

### **DESCRIPTION OF SOURCE CATEGORY**

Combustion of liquefied petroleum gas (LPG) in industrial and commercial processes and space heating, and recreational vehicles and barbecues.

### **DESCRIPTION OF METHODOLOGY**

Emissions from LPG combustion were estimated using emission factors from AP-42<sup>1</sup> Table 1.5-1 on page 1.5-2, in terms of pounds of emissions per thousand gallons of LPG and total annual recreational, industrial and commercial LPG usages in the county. Emission factors for propane were used because reported San Diego County LPG was propane.

### **COLLECTION OF DATA**

San Diego County 1987 annual recreational, industrial and commercial LPG usages were obtained by a survey of all LPG suppliers in San Diego County listed in the Yellow Pages under Gas - Propane. (See sample survey form) The survey form was designed so LPG sold by one distributor to another for resale would not be double counted.

### **ASSUMPTIONS**

1. LPG combustion area sources emit at the rates indicated in AP-42<sup>1</sup> for uncontrolled sources. The high end of the particulate emission factor range (0.09 - 0.44 lb./1000 gal) was assumed. The sulfur content specified in footnote "b" of AP-42 Table 1.5-1 (0.16 gr/1000 cu ft) was assumed.
2. LPG sales reported by distributors listed in the Yellow Pages represent actual 1987 San Diego County LPG usage.

### **TEMPORAL VARIATIONS**

Industrial LPG combustion was assumed to be uniform throughout the year and to occur during business hours.

Commercial LPG combustion was assumed to be highest in the winter and highest in the early morning and late evening.

Recreational LPG combustion was assumed to be uniform throughout the year (although it might be highest in summer) and to be highest in the early evening. Additionally, recreational activity is assumed to be twice as high on the weekend.

#### CHANGES FROM 1983 METHODOLOGY

This source category has not been updated since the 1978 inventory. The methodology is similar to that used for the 1978 inventory.

#### COMMENTS AND RECOMMENDATIONS

Emissions from LPG combustion are so minor that further updating may not be warranted.

#### REFERENCES

1. EPA, Compilation of Air Pollutant Emission Factors, Fourth Edition, AP-42, Volume I, Section 1.5, "Liquefied Petroleum Gas Combustion", (8/82).

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